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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,044	05/11/2001	Sergey Doudnikov	CIT/K-146	5077
34610	7590	06/08/2004	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			PATEL, SHEFALI D	
			ART UNIT	PAPER NUMBER
			2621	
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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/853,044

Applicant(s)

DOUDNIKOV ET AL.

Examiner

Shefali D Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "35" has been used to designate both "viewing zone adjust engine" (in Figure 3) and "aspectogram regeneration engine" (in figure 4). Please note that in the specification page 11 lines 18-19 "aspectogram regeneration engine" is referred to by character "36." Hence, element label 35 in Figure 4 ought to be "36." A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

- a. Figure 5 does not include element 39 as disclosed in the specification at page 13 lines 4-5. Suggestion: should element 48 in Figure 5 be element 39?
- b. Figure 5 does not include element 41 as disclosed in the specification at page 13 line 9. Suggestion: should element 47 in Figure 5 be element 41?

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “aspectogram” in claims 3-5 and 7-8 is used by the claim to mean “the invention shown in Figure 3 as also disclosed in the specification on page 9 line 24 to page 10 lines 1-7”, while the accepted meaning is not found in the dictionary or the specification. The term is indefinite because the specification does not clearly redefine the term.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kodama (US 5,917,460).

With regard to **claim 1** Kodama discloses an apparatus for displaying a three-dimensional image, which synthesizes two-dimensional microimages (the two 2D images are at 18 and 19 in Figure 2, col. 9 lines 57-64) and regenerates them in a three-dimensional image (the observer sees these two 2D images as a virtual image in 3D), the apparatus comprising: a detector (detector 20 in Fig. 2) for tracing movement of an observer head that observes the three-dimensional image, in real time and detecting the position of the observer head (tracing the movement and detecting the position on whether the observer's head is moving upwardly or downwardly with the detector 20 at col. 10 lines 1-10, 35-38, ); and a compensator for adjusting a viewing zone of the three-dimensional image (adjusting the view according the movement of the observer's head at col. 10 lines 55-66) and/or compensating distortion of the three-dimensional image in accordance with a signal input from the detector (See, col. 10 lines 11-18). Note, Kodama in the background information discloses prior art knowledge that converts two images signal in accordance with a three-dimensional movement of the head at col. 1 line 46 to col. 2 lines 1-10. Kodama discloses this at col. 9 lines 10-15 where the user is able to view the image "virtually" which is three-dimensional.

With regard to **claim 2** Kodama discloses the detector (detector device 20 in figure 2) including a head tracking system (this detector traces the head movement at col. 10 lines 1-10), which traces movement of the observer head in real time, and a head position detector for

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calculating the position of the observer head traced by the head tracking system (See, col. 10 lines 55-66).

With regard to **claim 3** Kodama discloses the compensator including either a viewing adjust engine which adjusts the viewing zone of the three-dimensional image by moving the microimages in accordance with a signal input from the head position detector (adjusting the view zone as seen in Figure 4, for example, from 25 to 26, at col. 10 lines 55-66), or an aspectogram regeneration engine which regenerates the microimages in accordance with the signal input from the head position detector to compensate distortion of the three-dimensional image (aspectogram as seen in Figure 2 regenerating the images using the image signal converter 21).

With regard to **claim 4** Kodama discloses an apparatus for displaying a three-dimensional image, comprising: an aspectogram containing a plurality of two-dimensional microimages displayed in real time (aspectogram in Figure 2 containing two-dimensional microimages 18 and 19); a microlens array for synthesizing the two-dimensional microimages and regenerating them in a three-dimensional image (microlens arrays 16 and 17 representing an image in three-dimension to an observer by using the image signal converter 21); a head tracking system for tracing movement of an observer head that observes the three-dimensional image, in real time (tracking system 20 in Figure 3); a head position detector for calculating the position of the observer head traced by the head tracking system (See, col. 10 lines 1-10); and a viewing adjust engine for adjusting a viewing zone of the three-dimensional image by moving the microimages in accordance with a signal input from the head position detector (see, col. 10 lines 55-66).

With regard to **claim 5** Kodama discloses an aspectogram regeneration engine which regenerates the microimages in accordance with the signal input from the head position detector to compensate distortion of the three-dimensional image (aspectogram as seen in Figure 2 regenerating the images using the image signal converter 21).

With regard to **claim 6** Kodama discloses the apparatus of claim 5, wherein the regenerated microimages are moved to form a new viewing zone centered relative to the moved observer head by the viewing adjust engine (See, col. 11 lines 34-55).

With regard to **claim 7**, Kodama discloses all of the claimed subject matter as already discussed above in claim 4 and the arguments are not repeated herein, but are incorporated by reference. Claim 7 distinguishes from claim 4 only in that it recites an aspectogram regeneration engine for regenerating the microimages in accordance with a signal input from the head position detector to compensate distortion of the three-dimensional image. Kodama discloses aspectogram as seen in Figure 2 regenerating the images using the image signal converter 21.

**Claim 8** recites identical features as claim 6. Thus, arguments similar to that presented above for claim 6 is equally applicable to claim 8.

**Claim 9** recites identical features as claim 1 except claim 9 is a method claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 9.

**Claim 10** recites identical features as claim 6 except claim 10 is a method claim. Thus, arguments similar to that presented above for claim 6 is equally applicable to claim 10.

With regard to **claim 11** Kodama discloses the step of compensating distortion of the three-dimensional image as discussed above including the step of regenerating the two-dimensional microimages (every time the observer moves his/her head as seen in Figure 5 the

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two dimensional images 18 and 19 are being regenerated, having a respective center, before image signal converter displays to the observer in three-dimension).

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,841,439; US 5,579,026; US 5,703,717; US 6,278,546; US 6,177,966; US 6,075,557; US 5,608,850.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D Patel whose telephone number is 703-306-4182. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**DANIEL MARIAM**  
**PRIMARY EXAMINER**

  
**DANIEL MARIAM**  
**PRIMARY EXAMINER**

Shefali D Patel  
Examiner  
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May 28, 2004